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piece 1, NC\_000913, xthA\_ydjX+, config: linear, direction: +, begin: 1831229, end: 1831444

... ir

```
{-----} sd-(11)-ir 1831302 Gap 3.0 bits  
-----| sd-ir 1831302 xtha_ydjX+ total 9.7 bits
```

The figure displays a protein sequence alignment across nine ORFs (1831310 to 1831390). The top row shows the amino acid sequence with codon numbers 5' to 3' and start sites marked with asterisks (\*). The bottom row shows the corresponding nucleotide sequence. Colored boxes highlight specific motifs: a red box for a signal peptide, a purple box for p35, a blue box for p10, and a yellow box for orf 25 codons. Red dots indicate stop codons. Below the sequences, labels indicate the function of each segment: ir xthA\_ydjX+, p35 3.8 bits, p10 2.4 bits, and [###] orf 25 codons.

$\lambda$  p35-(23)-p10\_1831358\_Gap\_1.4\_bits

|-----| p35-p10 1831358 total 4.7 bits (-----) ... p35-(23)-p10 1831401 Gap

The diagram illustrates a 35-bit register divided into two 7-bit sub-registers. The top sub-register is labeled "p35 5.6 bits" and the bottom one is labeled "p35 3.8 bits". Each sub-register is represented by a purple box containing a green vertical bar and a red "P" symbol. A dashed bracket above the top sub-register indicates its width, and another dashed bracket below the bottom sub-register indicates its width. The entire register is shown as a single purple box with a green vertical bar at the far left.

p10 0.1 bits

... -----} p35-(23)-p10 1831401 Gap 1.4 bits

p10 0.9 bits {-----} sd-(11)-ir 1831425 Gap 3.0 bits

```
[... p35-(23)-p10 1831395 Gap 1.4 bits |-----| sd-ir 1831425 xthA_ydjx+ total 8.6 bits
[... p35-p10 1831395 total 9.4 bits
[... p35-p10 1831401 total 5.1 bits
```

p35 5.6 bits